

Lesson Plans: Expansion of Population and Environment

Objective

The objective is to highlight the future population of the world in order to estimate its effect on the environment and on climate change.

Materials

Each group of students will need the following:

- Graph paper
- Pencil and pen
- Ruler

Important Points to Understand

When emission of greenhouse gases was discussed, methane was regarded as a major greenhouse gas that could trap more heat than carbon dioxide. Subsequently, livestock was also considered as a source of methane. If we carefully consider the expansion of the world's population, since this is quite dramatic, people may not be free from a charge similar to livestock for the release of gases into the atmosphere.

In addition, it is reasonable to believe that the growth of population will require extra land to be cleared for agriculture and the provision of food, husbandry of cattle, poultry, pigs etc., land for the provision of houses, and clearance for infrastructure. Past, present, and future populations of the world are given in the following table to have a feel on this issue.

Year	Data Status	World Population (Millions)
1650	Estimated	550
1750	Estimated	725
1850	Probable	1,175
1900	Probable	1,600
1950	Probable	2,564
1970	Approximate	3,700
1980	Neat actual	4,478
1990	Neat actual	5,300
1992	Neat actual	5,500
1993	Neat actual	5,576
1994	Neat actual	5,642
2000	Forecast	6,200
2025	Forecast	8,500
2100	Forecast	10,400
2200	Forecast	11,000

Procedure

1. Carefully study the population data given in the table to realize the increase of global population. (You might have a second thought for your future family plan or marriage plan!).
2. Plot the data on graph paper, time on the horizontal axis and population on the vertical axis.
3. Write down your view and reasons first on this population issue based upon the graph and compare with others.

Questions

1. What has happened in the local country in the life of the parents of the students in the last 5-10 years due to population?
2. How much land has been cleared near your area?
3. What changes have taken place which might involve some of the hazards described in the module (for car usage or other type of energy)?
4. Write an essay (about 2 pages) on *Impacts of Human Population on Climate Change*.